

WHAT IS CLAIMED IS:

1. A computer-implemented method for generating a geographic travelogue of a trip, comprising:
 - 5 obtaining content items associated with the trip, the content items including any piece of information that is displayable on a computing device; geographically coding the content items to tag the content items with geographic locations associated with the trip to create geo-coded content items; and
 - 10 automatically integrating the geo-coded content items with other multimedia data associated with the trip to generate the geographic travelogue.
2. The computer-implemented method as set forth in claim 1, further comprising:
 - 15 selecting a map displaying an area visited during the trip; and automatically integrating the map into the geographic travelogue.
3. The computer-implemented method as set forth in claim 2, further comprising using a location resolver capable of converting between various
 - 20 location reference systems to resolve the geographic locations of the geo-coded content items.
4. The computer-implemented method as set forth in claim 3, further comprising converting the geographic locations of the geo-coded content items
 - 25 from a content item location reference system to map location reference system that is compatible with the selected map.
5. The computer-implemented method as set forth in claim 1, further comprising using a clustering technique to cluster the geo-coded content items
 - 30 into clusters based on the geographic locations of the geo-coded content items.

6. The computer-implemented method as set forth in claim 5, further comprising integrating each of the clusters of geo-coded content items into the geographic travelogue.

5 7. The computer-implemented method as set forth in claim 2, further comprising selecting a size, a shape, and a type of the map based on the geographic locations of the geo-coded content items.

10 8. The computer-implemented method as set forth in claim 5, further comprising generating additional content items relevant to the at least one of: (a) the geo-coded content items; (b) the clusters.

15 9. The computer-implemented method as set forth in claim 2, further comprising automatically arranging the geo-coded content items and the map within the geographic travelogue.

10. The computer-implemented method as set forth in claim 1, further comprising:

20 determining subjects of the trip, the subjects including a person, objects, or a set thereof that traveled together on the trip over an interval of time; and

automatically integrating geo-coded content items from several subjects into the geographic travelogue.

25 11. The computer-implemented method as set forth in claim 1, further comprising:

defining tracks as a record of where a subject traveled during the trip over an interval of time, the subject including at least one of: (a) a person; (b) an object; and

automatically incorporating the tracks into the geographic travelogue such that the tracks are intelligently positioned within the geographic travelogue.

5 12. A computer-readable medium having computer-executable instructions for performing the computer-implemented method recited in claim 1.

10 13. A computer-readable medium having computer-executable instructions for facilitating automated inclusion of maps and other geographical data into travelogues about a trip, comprising:

 tagging pieces of trip information, which are displayable in the travelogue, with their associated geographic locations from the trip to produce geo-coded content items;

15 automatically selecting sizes, shapes, and types of maps based on the geographic locations of the geo-coded content items; and

 automatically incorporating the maps and the geo-coded content items with other multimedia data to produce a geographic travelogue.

20 14. The computer-readable medium of claim 13, further comprising: obtaining tracks of the trip, where tracks includes a record of where a subject traveled over a span of time; and

 automatically selecting sizes, shapes, and types of maps based on the tracks.

25 15. The computer-readable medium of claim 13, wherein other multimedia data includes video, photographs, and blocks of text about the trip.

30 16. The computer-readable medium of claim 13, further comprising: expressing geographic locations on the maps in a map location reference system;

expressing geographic locations associated with the geo-coded content items in a content item location reference system; and

5 converting the geo-coded content items from a geographic location expressed in the content item location reference system to the map location reference system.

10 17. The computer-readable medium of claim 13, further comprising generating clusters of geo-coded content items using a clustering technique based on the geographic locations.

18. The computer-readable medium of claim 17, wherein the clustering technique includes at least one of: (a) agglomerative clustering; (b) *k*-means clustering; (c) expectation-maximization clustering.

15 19. The computer-readable medium of claim 17, further comprising simplifying an appearance of the geo-coded content items on a map by reducing a number of visual elements representing the geo-coded content items.

20 20. The computer-readable medium of claim 17, further comprising creating a hierarchical organization of travelogue pages based the clusters.

25 21. The computer-readable medium of claim 17, further comprising dividing the geographic travelogue in a plurality of separate geographic travelogues based on the clusters.

22. The computer-readable medium of claim 17, further comprising:
determining whether to exclude certain ones of the geo-coded content items from a cluster based on a comparison between the cluster and the remaining clusters; and

30 automatically giving a title to a cluster based on the geo-coded content items contained in the cluster.

23. The computer-readable medium of claim 22, wherein determining whether to exclude certain ones of the geo-coded content items from a cluster further comprises at least one of: (a) a random selection process; (b) a
5 representative-item selection process that creates sub-clusters of items based on a similarity metric and selects a limited number of sub-clusters from each cluster; (c) an elimination of a single-item cluster.

24. The computer-readable medium of claim 13, further comprising
10 arranging the geo-coded content items on corresponding maps such that each of the geo-coded content items is on or near its geographic location represented on the maps.

25. The computer-readable medium of claim 24, further comprising
15 inserting visual cues in the geographic travelogue to show a relationship between the geo-coded content items and their corresponding geographic locations.

26. The computer-readable medium of claim 25, wherein the visual cues include at least one of: (a) active visual cues that dynamically change
20 based on user interaction with the geographic travelogue; (b) passive visual cues that are statically viewable in the geographic travelogue.

27. The computer-readable medium of claim 13, further comprising automatically identifying geographic intersections in the trip, where geographic
25 intersections are geographic locations where two or more subjects have visited.

28. The computer-readable medium of claim 13, further comprising automatically identifying geographic and temporal intersections in the trip, where geographic and temporal intersections are geographic locations where two or
30 more subjects visited at overlapping times.

29. The computer-readable medium of claim 28, further comprising creating a separate travelogue at an intersection of the geographic and temporal intersections, wherein content items of all subjects that geographic and temporal intersect are combined.

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30. The computer-readable medium of claim 28, further comprising uniquely marking the geographic and temporal intersections in other travelogues and generating link to the other travelogues.

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31. The computer-readable medium of claim 17, further comprising automatically selecting a special set of content items based on the clusters and subjects that were part of the trip.

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32. The computer-readable medium of claim 17, further comprising performing multi-faceted hierarchical organization of pages of the geographic travelogue based on the clusters and subjects of the trip.

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33. The computer-readable medium of claim 14, further comprising:
aligning and overlaying the tracks on the maps; and
snapping the tracks onto known landmarks on the maps.

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34. The computer-readable medium of claim 14, further comprising correlating the tracks with the geo-coded content items using visual cues that show a relationship between the geo-coded content items and their corresponding geographic locations.

35. The computer-readable medium of claim 14, further comprising dynamically displaying the tracks on the maps in an animated manner.

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36. The computer-readable medium of claim 17, further comprising:

analyzing the geographic locations of the clusters and geo-coded content items; and

adding more content items to the geographic travelogue based on the analysis.

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37. A geographic travelogue authoring system for authoring on a computing device a geographic travelogue of a trip, comprising:

a content item, wherein the content item includes a piece of information associated with the trip that is displayable on the computing device;

10 a geographic coder that marks the content item with its associated geographic location from the trip to produce a geo-coded content item;

a map selection module that selects a map that corresponds to the geographic location of the geo-coded content item; and

15 a content item and map layout module that automatically incorporates the geo-coded content items, maps, and other multimedia data associated with the trip to produce the geographic travelogue.